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fields
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NEWS 12 SEP 14 STN Patent Forum to be held October 13, 2004, in Iselin, NJ
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NEWS 14 SEP 27 SWETSCAN will no longer be available on STN

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=> file caplus

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0.21

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FILE COVERS 1907 - 15 Oct 2004 VOL 141 ISS 17
FILE LAST UPDATED: 14 Oct 2004 (20041014/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> copolymer

537585 COPOLYMER
177027 COPOLYMERS
L1 584326 COPOLYMER
(COPOLYMER OR COPOLYMERS)

=> reverse (l) termal (l) L1

183766 REVERSE
7695 REVERSES
190691 REVERSE
(REVERSE OR REVERSES)
21 TERMAL
L2 0 REVERSE (L) TERMAL (L) L1

=> reverse (l) Thermal

183766 REVERSE
7695 REVERSES
190691 REVERSE
(REVERSE OR REVERSES)
951547 THERMAL
66 THERMALS
951576 THERMAL
(THERMAL OR THERMALS)
L3 4539 REVERSE (L) THERMAL

=> L1 and L3

L4 142 L1 AND L3

=> antigen (L) L4

PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'ANTIGEN (L) L4'
260277 ANTIGEN
205197 ANTIGENS
322957 ANTIGEN
(ANTIGEN OR ANTIGENS)
L5 6 ANTIGEN (L) L4

=> D L5 IBIB ABS 1-6

L5 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:466547 CAPLUS

DOCUMENT NUMBER: 137:37682
 TITLE: Bioactive agent delivering system comprised of microparticles within a biodegradable to improve release profiles
 INVENTOR(S): Shih, Chung; Zenter, Gaylen
 PATENT ASSIGNEE(S): Macromed, Inc., USA
 SOURCE: U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S. Ser. No. 559,507.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002076441	A1	20020620	US 2001-906041	20010713
US 6589549	B2	20030708		
US 6287588	B1	20010911	US 2000-559507	20000427
WO 2003005961	A2	20030123	WO 2002-US22017	20020712
WO 2003005961	A3	20040304		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1414406	A2	20040506	EP 2002-749958	20020712
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

PRIORITY APPLN. INFO.:
 US 2000-559507 A2 20000427
 US 1999-131562P P 19990429
 US 2001-906041 A 20010713
 WO 2002-US22017 W 20020712

AB A composition and method for releasing a bio-active agent or a drug within a biol. environment in a controlled manner is disclosed. The composition is a dual phase polymeric agent-delivery composition comprising a continuous biocompatible gel phase, a discontinuous particulate phase comprising defined microparticles and an agent to be delivered. A microparticle containing a bio-active agent is releasably entrained within a biocompatible polymeric gel matrix. The bioactive agent release may be contained in the microparticle phase alone or in both the microparticles and the gel matrix. The release of the agent is prolonged over a period of time, and the delivery may be modulated and/or controlled. In addition, a second agent may be loaded in some of the microparticles and/or the gel matrix. A microparticle **reverse thermal** gelation agent delivery system contained Zn-hGH incorporated into glycolide-lactide **copolymer** microspheres.

L5 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2002:158298 CAPLUS
 DOCUMENT NUMBER: 136:189325
 TITLE: Delivery vehicle composition and methods for delivering **antigens** and other drugs
 INVENTOR(S): Blonder, Joan P.; Coeshott, Claire M.; Rodell, Timothy C.; Schauer, Wren H.; Rosenthal, Gary J.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 32 pp., Cont.-in-part of U.S. Ser. No. 602,654.

CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002025326	A1	20020228	US 2001-888235	20010622
PRIORITY APPLN. INFO.:			US 2000-602654	A2 20000622
			US 2001-278267P	P 20010323

AB The present invention provides an immunogen composition and methods for using the same for the development of immunity, and particularly at mucosal sites in a mammal, thereby providing immunity at the site of entry for many major pathogenic organisms and also systemic immunity. The immunogen composition includes an **antigen**, a biocompatible polymer, and a liquid vehicle, with the biocompatible polymer and liquid vehicle being present in such proportions and interacting in such a way that the immunogen composition exhibits **reverse-thermal** viscosity behavior. A delivery vehicle composition including a drug other than an **antigen** is also provided. Methods are provided for delivering the compns. of the invention to a host.

L5 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:10235 CAPLUS

DOCUMENT NUMBER: 136:58777

TITLE: Methods for use of delivery composition for expanding, activating, committing or mobilizing one or more pluripotent, self-renewing and committed stem cells
INVENTOR(S): Talmadge, James E.; Rosenthal, Gary J.; Etter, Jeffrey B.

PATENT ASSIGNEE(S): Rxkinetix, Inc., USA; Board of Regents of the University of Nebraska

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002000173	A2	20020103	WO 2001-US20544	20010626
WO 2002000173	A3	20020613		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 2001073041	A5	20020108	AU 2001-73041	20010626
US 2002028515	A1	20020307	US 2001-893372	20010626
US 6649189	B2	20031118		
US 2002102272	A1	20020801	US 2001-893339	20010626
PRIORITY APPLN. INFO.:			US 2000-214298P	P 20000626
			US 2001-274891P	P 20010309
			WO 2001-US20544	W 20010626

AB A hematopoietic growth factor delivery composition includes a hematopoietic growth factor, a liquid vehicle, a first biocompatible polymer and a second biocompatible polymer. The composition exhibits **reverse-thermal** viscosity behavior, due to interaction between the first

biocompatible polymer and the liquid vehicle. The second biocompatible polymer helps to protect the first biocompatible polymer from being dissolved in vivo following administration to a host.

L5 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:935520 CAPLUS
DOCUMENT NUMBER: 136:68695
TITLE: Delivery vehicle composition and methods for
delivering **antigens** and other drugs
INVENTOR(S): Rosenthal, Gary J.; Rodell, Timothy C.; Blonder, Joan
P.; Coeshott, Claire M.; Schauer, Wren H.
PATENT ASSIGNEE(S): Rxkinetix, Inc., USA
SOURCE: PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001098206	A1	200111227	WO 2001-US20096	20010622
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1315672	A1	20030604	EP 2001-954595	20010622
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRIORITY APPLN. INFO.:			US 2000-602654	A 20000622
			US 2001-278267P	P 20010323
			WO 2001-US20096	W 20010622
AB	The present invention provides an immunogen composition and methods for using the same for the development of immunity, and particularly at mucosal sites in a mammal, thereby providing immunity at the site of entry for many major pathogenic organisms and also systemic immunity. The immunogen composition includes an antigen , a biocompatible polymer, and a liquid vehicle, with the biocompatible polymer and liquid vehicle being present in such proportions and interacting in such a way that the immunogen composition exhibits reverse-thermal viscosity behavior. A delivery vehicle composition including a drug other than an antigen is also provided. Methods are provided for delivering the compns. of the invention to a host.			
REFERENCE COUNT:	5	THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT		

L5 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:405716 CAPLUS
DOCUMENT NUMBER: 135:362450
TITLE: Biodegradable block **copolymers** for delivery
of proteins and water-insoluble drugs
AUTHOR(S): Zentner, G. M.; Rathi, R.; Shih, C.; McRea, J. C.;
Seo, M.-H.; Oh, H.; Rhee, B. G.; Mestecky, J.;
Moldoveanu, Z.; Morgan, M.; Weitman, S.
CORPORATE SOURCE: MacroMed Inc., Sandy, UT, 84070, USA
SOURCE: Journal of Controlled Release (2001), 72(1-3), 203-215
CODEN: JCREEC; ISSN: 0168-3659
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Release of several drugs from new ABA-type biodegradable **thermal** gels, ReGel, including proteins and conventional mols., are presented. These are biodegradable, biocompatible polymers that demonstrate **reverse thermal** gelation properties. Organic solvents are not used in the synthesis, purification, or formulation of these polymers. The unique characteristics of ReGel hinge on the following two key properties: (1) ReGel is a water soluble, biodegradable polymer at temps. below the gel transition temperature; (2) ReGel forms a water-insol. gel once injected. This is consistent with a hydrophobically bonded gel state where all interactions are phys., with no covalent crosslinking. An increase in viscosity of approx. 4 orders of magnitude accompanies the sol-gel transition. The gel forms a controlled release drug depot with delivery times ranging from 1 to 6 wk. ReGel's inherent ability to solubilize (400 to >2000-fold) and stabilize poorly soluble and sensitive drugs, including proteins is a substantial benefit. The gel provided excellent control of the release of paclitaxel for approx. 50 days. Direct intratumoral injection of ReGel/paclitaxel (OncoGel) results in a slow clearance of paclitaxel from the injection site with minimal distribution into any organ. Efficacies equivalent to maximum tolerated systemic dosing were observed at

OncoGel doses that were 10-fold lower. Data on protein release (pGH, G-CSF, insulin, rHbsAg) and polymer biocompatibility are discussed.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:790276 CAPLUS

DOCUMENT NUMBER: 133:340262

TITLE: Drug delivery system based on biodegradable polyester microparticles

INVENTOR(S): Shih, Chung; Zentner, Gaylen M.

PATENT ASSIGNEE(S): Macromed, Inc., USA

SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000066085	A1	20001109	WO 2000-US11387	20000428
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 6287588	B1	20010911	US 2000-559507	20000427
PRIORITY APPLN. INFO.:			US 1999-131562P	P 19990429
			US 2000-559507	A 20000427

AB A composition and method for releasing a bioactive agent or a drug within a biol. environment in a controlled manner is disclosed. The composition is a dual phase polymeric agent-delivery composition comprising a continuous biocompatible gel phase, a discontinuous particulate phase comprising defined microparticles and an agent to be delivered. A microparticle containing a bio-active agent is entrained within a biocompatible polymeric gel matrix. The bio-active agent release may be contained in the microparticle phase alone or in both the microparticles and the gel matrix. The release of the agent is prolonged over a period of time, and

the delivery may be modulated and/or controlled. In addition, a second agent may be loaded in some of the microparticles and/or the gel matrix. Zn-human growth hormone was incorporated into poly(DL-lactide-co-glycolide) microspheres. The microspheres were added to **reverse thermal** gelation solution (RTG) (20% in 10 mM HEPES buffer, pH 7.0) to suspend the particles. The RTG-microparticle system of the present invention effectively reduced the initial burst effect of the microparticle delivery system.2 0 EXAMPLE.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> 25R1

L6 9 25R1

=> polymer and L6

970735 POLYMER

808217 POLYMERS

1317946 POLYMER

(POLYMER OR POLYMERS)

L7 2 POLYMER AND L6

=> 31R1

L8 35 31R1

=> polymer and L8

970735 POLYMER

808217 POLYMERS

1317946 POLYMER

(POLYMER OR POLYMERS)

L9 7 POLYMER AND L8

=> B L7 IBIB ABS1-2

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'D' IS AN AMBIGUOUS FILE NAME

DDFB - Derwent Drug File, Backfile 1964 - 1982

DDFU - Derwent Drug File from 1983 - present

DEMAS - German Trademarks 1894 - Present

DETERM - DETERM-DECHEMA thermophysical property database

DGENE - Derwent Geneseq Database 1981 - present

DIOGENES - FDA Regulatory Updates 1976-present

DIPPR - AIChE Design Inst. Physical Property Data File

DISSABS - Dissertation Abstracts from 1861 to present

DJSMDS - Derwent Reaction Search Service DJSM (Subscribers)

DJSMONLINE - Derwent Reaction Search Service DJSM

DKF - The German Automotive Engineering Database 1974-date

DPCI - Derwent Patents Citation Index 1978 to present

DRUGB - Derwent Drug File, Backfile 1964 - 1982 (Subscribers)

DRUGMONOG - IMS Product Monographs (Approved Pharm. Industry Users)

DRUGMONOG2 - IMS Product Monographs

DRUGU - Derwent Drug File from 1983-present (Subscribers)

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accessing the remaining file names entered.
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=> D L7 IBIB ABS 1-2

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:409776 CAPLUS
DOCUMENT NUMBER: 125:72051
TITLE: **Polymer**-dispersed liquid-crystal display
device
INVENTOR(S): Abe, Tomya; Okabe, Masahiro
PATENT ASSIGNEE(S): Hitachi Cable, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08104873	A2	19960423	JP 1994-242904	19941006

PRIORITY APPLN. INFO.: JP 1994-242904 19941006
AB The title display device uses a film composed of liquid crystal drops
covered with a layer of $\text{HO}(\text{C}_3\text{H}_6\text{O})_a(\text{C}_2\text{H}_4\text{O})_b(\text{C}_3\text{H}_6\text{O})_a\text{H}$ ($a, b \geq 1$),
which are dispersed in a **polymer** matrix.

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1987:95804 CAPLUS
DOCUMENT NUMBER: 106:95804
TITLE: Adjuvant effects of nonionic block **polymer**
surfactants on liposome-induced humoral immune
response
AUTHOR(S): Zigterman, Guy J. W. J.; Snippe, Harm; Jansze,
Margriet; Willers, Jan M. N.
CORPORATE SOURCE: Dep. Immunol., State Univ. Utrecht, Utrecht, 3511 GG,
Neth.
SOURCE: Journal of Immunology (1987), 138(1), 220-5
CODEN: JOIMA3; ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The ability of several surface-active agents to stimulate the humoral
immune response in mice against haptenated liposomes was tested. The
surfactants were block copolymers of hydrophilic polyoxyethylene (POE) and
hydrophobic polyoxypropylene (POP) that differed in mol. weight, percentage
of POE, and mode of linkage of POP to POE. The liposomes were haptenated
with tripeptide-enlarged dinitrophenyl coupled to
phosphatidylethanolamine, which was incorporated into the liposomal
membrane. Addnl. injection of mice with surfactant stimulated serum
hemagglutination titers and splenic plaque-forming cell (PFC) nos. to
varying extents. Block **polymers** with POP chains flanking a POE
center, as well as **polymers** with POE chains flanking a POP
center, displayed high adjuvant activity. These block **polymers**
stimulated the antibody response in a dose-dependent manner. They
stimulated the antibody response with both high and low antigen doses.
Furthermore, the addition of one of these adjuvants (25R1) reduced
the amount of carrier lipid required in the liposome in order to obtain an
optimal antibody response. The surfactants, which displayed high adjuvant
activity, did not interfere with liposome stability as measured with a

liposome lysis assay. Moreover, in vitro preincubation of liposomes with a block **polymer** did not affect their immunogenicity. Optimal adjuvant activity was observed when both adjuvant and liposomes were administered by the same route. Simultaneous injection of both components, however, is not a prerequisite. Conclusively, it can be stated that nonionic block **polymer** surfactants are potent adjuvants for stimulation of the antibody response against haptened liposomes.

=> D L9 IBIB ABS 1-9

L9 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:301156 CAPLUS
DOCUMENT NUMBER: 138:308050
TITLE: Improving the hydrophilicity of water repellent soil
INVENTOR(S): Kostka, Stanley J.; Bially, Paul Thomas
PATENT ASSIGNEE(S): Aquatrols Corporation of America, Inc., USA
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003031535	A1	20030417	WO 2002-US32163	20021008
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2003073583	A1	20030417	US 2002-265950	20021007
WO 2003031536	A1	20030417	WO 2002-US32164	20021008
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1442096	A1	20040804	EP 2002-800965	20021008
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
EP 1442097	A1	20040804	EP 2002-800966	20021008
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
PRIORITY APPLN. INFO.:			US 2001-328027P	P 20011009
			US 2002-266025	A 20021007
			US 2002-265950	A 20021007
			WO 2002-US32163	W 20021008
			WO 2002-US32164	W 20021008
AB	Water repellent soil is treated with low concns. of a blend of alkyl polyglycoside and EO-PO block copolymer in a weight ratio of 6:1-0.5:1 of glycoside:block copolymer in order to rapidly increase the wetting rate of			

the water repellent soil.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:384325 CAPLUS

DOCUMENT NUMBER: 133:31899

TITLE: Composition for forming protective coating and
removing paint from articles subjected to paint spray
INVENTOR(S): Wilson, Neil R.; Summerfield, Steven R.; Clark, Mathew
W.; Moore, Michael E.

PATENT ASSIGNEE(S): Gage Products Co., USA

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000032704	A1	20000608	WO 1999-US28707	19991203
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: US 1998-110734P P 19981203

AB Title composition for forming a protective coating comprises an adhesion reducing compound including a low surface energy material and/or a filler along with one or more optional ancillary ingredients such as adhesion promoters, dispersants, corrosion inhibitors, thickeners, surfactants, pH control agents, colorants, plasticizers, defoaming agents, and combinations thereof. The composition can also be used to strip paint from a workpiece by the following steps: (A) applying a protective coating to a surface of a workpiece prior to the workpiece being contacted with paint, (B) drying the protective coating onto the surface of the workpiece, (C) contacting the workpiece with paint, and (D) removing the paint from the painted workpiece by applying water at a pressure of .apprx.100-10000 lb/in.2.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:561321 CAPLUS

DOCUMENT NUMBER: 129:190564

TITLE: Room temperature vulcanizable silicone sealant
compositions having a reduced stringiness and process
for reducing the stringiness

INVENTOR(S): Lin, Chiu-sing; Lucas, Gary Morgan; Fitzsimmons,
Kimberly M.

PATENT ASSIGNEE(S): General Electric Co., USA

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 857760	A1	19980812	EP 1998-300852	19980205
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 10292167	A2	19981104	JP 1998-16306	19980129
CN 1190666	A	19980819	CN 1998-100292	19980205

PRIORITY APPLN. INFO.:

AB The title compns. comprise (A) polysiloxanes HO(SiRR'O)xH (R, R' = C1-40 hydrocarbyl; x = value to **polymer** viscosity 500-200,000 at 25°); (B) organosilicon compds. having ≥2 hydrolyzable groups or their partial hydrolysis products from RaSi(ON:CR'2)4-a, RaSi(OR')4-a, RaSi(OCOR')4-a, RaSi(NR'R'')4-a, and RaSi(NR'''COR')4-a (R, R', R''' = C1-40 hydrocarbyl; a = 0-2; R'' = H, R); (C) a nonionic surfactant chosen from polyethylene glycol, polypropylene glycol, ethoxylated castor oil, oleic acid ethoxylate, alkylphenol ethoxylate, polyethylene polypropylene glycol, and silicone polyether copolymers; (D) a reinforcing filler; and (E) a condensation cure catalyst. A composition comprising di-Me silicone oil 72.74, di-Me polysiloxane fluid 6, pyrogenic silica 8.87, Al stearate 0.10, and catalyst solution (comprising methyltriacetoxysilane 72.2664, di-tert-butoxydiacetoxysilane 27.1371, and dibutyltin dilaurate 0.5964%) 4% showed substantially reduced stringiness with addition of 1.5% silicone polyether surfactant.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:277690 CAPLUS

DOCUMENT NUMBER: 129:10586

TITLE: Photographic emulsion containing radiation-sensitive silver halide grains

INVENTOR(S): Tsaur, Allen Keh-Chang

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10115884	A2	19980506	JP 1997-265289	19970930
GB 2317708	A1	19980401	GB 1997-20306	19970925

PRIORITY APPLN. INFO.:

AB The emulsion comprises co-precipitated radiation-sensitive Ag halide grains containing >50 mol% bromide based on Ag and a disperse medium, and satisfies the following conditions: (1) the grains having a variation coefficient <25%; (2) >90% of the total projected area of the grains being occupied by tabular grains having [111] principal plane and showing average thickness <0.07 μm; (3) the disperse medium being a polyalkylene oxide block copolymer surfactant containing 2 terminal lipophilic alkylene oxide blocks linked by a hydrophilic alkylene oxide block that occupies 4-96% of the mol. weight of the **polymer**. The emulsion containing super-thin tabular Ag halide grains with low disperse degree crystallites size and high bromide content is obtained.

L9 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:178113 CAPLUS

DOCUMENT NUMBER: 128:237173

TITLE: Limited-dispersity epitaxially sensitized ultrathin tabular-grain photographic emulsion

INVENTOR(S): Deaton, Joseph Charles; Fenton, David Earl; Tsaur, Allen Keh-chang

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: U.S., 12 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5726007	A	19980310	US 1996-722403	19960930

PRIORITY APPLN. INFO.: US 1996-722403 19960930

AB A photog. emulsion is disclosed comprised of copolymerized radiation-sensitive silver halide grains containing greater than 70 mol percent bromide, based on silver, and exhibiting a coefficient of variation of less than 30 percent. Greater than 90 percent of total projected area of the grains is accounted for by tabular grains having {111} major faces, exhibiting a thickness of less than 0.07 μm , and having latent image-forming silver salt epitaxy chemical sensitization sites on their surfaces, and a dispersing medium that contains a grain dispersity-reducing concentration of a polyalkylene oxide block copolymer surfactant comprised of two terminal lipophilic alkylene oxide block units linked by a hydrophilic alkylene oxide block unit accounting for from 4 to 96 percent of the mol. weight of the polymer. The emulsion offers unexpectedly low levels of min. d. and can be more easily manufactured as compared to conventional ultrathin tabular-grain emulsions with comparably limited grain dispersity.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:573526 CAPLUS

DOCUMENT NUMBER: 117:173526

TITLE: Lithographic desensitizing ink for carbonless paper

INVENTOR(S): Hays, Byron G.; Petrone, John P.

PATENT ASSIGNEE(S): BASF Corp., USA

SOURCE: U.S., 7 pp. Cont.-in-part of U.S. Ser. No. 422,851, abandoned.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5122186	A	19920616	US 1991-653731	19910211

PRIORITY APPLN. INFO.: US 1989-422851 19891017

AB The title inks comprise alkylamine desensitizer having substituted secondary or tertiary amine or tertiary amine oxide, hydroxylated polymerized oil, and acidic resin dissolved in hydrophobic hydroxylic solvent, e.g. polyoxyalkylene, and optionally pigment. Thus, 96 base ink containing TiO₂ 145, CaCO₃ 68, fumed silica 68, tall oil rosin (Unitol NCY) 175, Pluronic-31R1 301, polymerized castor oil 175, and Magiesol 22 parts was mixed with 5 parts 80% solution of Damox 1010 (didecylmethylamine oxide) to give a lithog. ink showing tack 13.2, good transfer from lithog. plate, and good desensitization.

L9 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:116830 CAPLUS

DOCUMENT NUMBER: 112:116830

TITLE: The influence of different adjuvants on the immune response to a synthetic peptide comprising amino acid residues 9-21 of herpes simplex virus type 1 glycoprotein D

AUTHOR(S): Geerligs, H. J.; Weijer, W. J.; Welling, G. W.;
Welling-Wester, S.
CORPORATE SOURCE: Lab. Med. Microbiol., Rijksuniv. Groningen, Groningen,
9713 EZ, Neth.
SOURCE: Journal of Immunological Methods (1989), 124(1),
95-102
CODEN: JIMMBG; ISSN: 0022-1759
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The immunomodulating properties of different adjuvant systems on the murine humoral and cellular immune response to a synthetic peptide comprising amino acid residues 9-21 of glycoprotein D of herpes simplex virus type 1 (HSV-1) were investigated. For immunization, the peptide was conjugated to ovalbumin or bovine serum albumin by glutaraldehyde and the adjuvants used in this study were Freund's complete adjuvant (FCA), aluminum hydroxide, the Ribi adjuvant system (RAS) and two non-ionic block **polymer** surfactants, viz L101 and 31R1, in oil in water emulsions. High anti-peptide antibody titers were obtained after immunization with FCA, aluminum hydroxide, RAS and L101. All adjuvants, except RAS, stimulated the induction of delayed type hypersensitivity obtained after immunization with peptide 9-21 coupled to ovalbumin and elicited by injection of purified HSV-1 virions in the footpad. Challenge with a LD of HSV-1 showed that mice immunized with peptide 9-21 coupled to ovalbumin in combination with FCA, RAS and L101, resp., were significantly protected. Although immunization with peptide 9-21 coupled to ovalbumin combined with aluminum hydroxide stimulated induction of delayed type hypersensitivity, no significant protective immunity against the challenge was generated.

=> antigen (1) polymer
260277 ANTIGEN
205197 ANTIGENS
322957 ANTIGEN
(ANTIGEN OR ANTIGENS)
970735 POLYMER
808217 POLYMERS
1317946 POLYMER
(POLYMER OR POLYMERS)

L10 2606 ANTIGEN (L) POLYMER

=> copolymer and L10
537585 COPOLYMER
177027 COPOLYMERS
584326 COPOLYMER
(COPOLYMER OR COPOLYMERS)

L11 420 COPOLYMER AND L10

=> "thermal reverse"
951547 "THERMAL"
66 "THERMALS"
951576 "THERMAL"
("THERMAL" OR "THERMALS")
183766 "REVERSE"
7695 "REVERSES"
190691 "REVERSE"
("REVERSE" OR "REVERSES")
L12 40 "THERMAL REVERSE"
("THERMAL" (W) "REVERSE")

=> L12 and L11
L13 0 L12 AND L11

=> temperature (1) sensitive

501437 TEMPERATURE
 73072 TEMPERATURES
 565106 TEMPERATURE
 (TEMPERATURE OR TEMPERATURES)
 2728511 TEMP
 702586 TEMPS
 3037707 TEMP
 (TEMP OR TEMPS)
 3141603 TEMPERATURE
 (TEMPERATURE OR TEMP)
 531949 SENSITIVE
 85 SENSITIVES
 531990 SENSITIVE
 (SENSITIVE OR SENSITIVES)
 L14 68199 TEMPERATURE (L) SENSITIVE

=> L14 and l11

L15 3 L14 AND L11

=> D L15 IBIB ABS 1-3

L15 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:518942 CAPLUS
 DOCUMENT NUMBER: 131:155512
 TITLE: Optical fiber surface plasmon sensor for detecting
 biological substances, etc.
 INVENTOR(S): Nomoto, Takeshi
 PATENT ASSIGNEE(S): Canon K. K., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11223597	A2	19990817	JP 1998-25932	19980206
PRIORITY APPLN. INFO.:			JP 1998-25932	19980206

AB The sensor free from **temp.**- and pressure-dependent drift of resonance conditions has an optical fiber in which the core fiber is coated with a clad layer in some part and coated with a metal layer in another part, and a part of the metal layer has a dielec. layer **sensitive** to analytes in a direction parallel to the fiber axis. The dielec. layer **sensitive** to analytes may be a **polymer** layer supporting **antigens**, antibodies, hormones, receptors, polypeptides, nucleic acids, cells, glycoproteins, lipids, and/or pigments. A part (20 mm length from one end) of a core layer of a step-index multimode optical fiber was removed, the exposed core layer was coated with a Au layer by vapor deposition, and the end was coated with a Ag layer as a reflector. A dielec. layer supporting anti-HIV-1 env gp120/160 monoclonal antibody was formed on the Au layer only in 10 mm length from the end by treating the Au layer with cystamine dihydrochloride, bis(sulfosuccinimidyl) suberate, and then the antibody to give a sensor, which detected recombinant HIV-1 gp120 in a wide concentration range. A similarly prepared sensor having a 2-ethylhexyl methacrylate-styrene **copolymer** layer on the Au layer was useful for determination of hexane.

L15 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:534538 CAPLUS
 DOCUMENT NUMBER: 119:134538
 TITLE: Targetable photoactivatable drugs. 3. In vitro
 efficacy of polymer bound chlorin e6 toward human

hepatocarcinoma cell line (PLC/PRF/5) targeted with galactosamine and to mouse splenocytes targeted with anti-Thy 1.2 antibodies

AUTHOR(S): Rihova, Blanka; Krinick, Nancy L.; Kopecek, Jindrich
 CORPORATE SOURCE: Inst. Microbiol., Czech Repub. Acad. Sci., Prague, 14220, Czech.

SOURCE: Journal of Controlled Release (1993), 25(1-2), 71-87
 CODEN: JCREEC; ISSN: 0168-3659

DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Chlorin e6 and HPMA copolymer-bound chlorin e6 were compared with chlorin e6 polymer conjugates containing galactosamine or anti-Thy 1.2 antibody as targeting moieties. Galactosamine recognizes asialoglycoprotein receptors on the human hepatocarcinoma cell line PLC/PRF/5 and the anti-Thy 1.2 antibody interacts with Thy 1.2 alloantigens on mouse splenic T cells. The efficiency of photodynamic injury as a function of incubation time and temp., and irradiation time was studied. Two-day-old cultures of PLC/PRF/5 cell line were most sensitive to HPMA copolymer bound chlorin e6 (targeted or nontargeted), whereas no differences were observed when free drug was tested on 1-, 2- or 3-day-old cultures. Dark toxicity of the free drug was observed at concns. as low as 2×10^{-6} M. Dark toxicity decreased when chlorin e6 was bound to HPMA copolymers, especially to conjugates containing targeting moieties. The effect of incubation time was seen only in the hepatocarcinoma cell culture. For galactosamine-targeted HPMA copolymer bound chlorin e6, 2-3 h were necessary to induce a pronounced killing effect. For anti-Thy 1.2 targeted polymeric drug and for free chlorin e6, 1 h of incubation was sufficient to load the cells with a photolytic dose of chlorin e6. Dependence on the time of irradiation was observed in both targeted conjugates. One hour of irradiation induced only limited photolysis, whereas 7.5 h of irradiation was necessary for substantial photodynamic injury. Photodynamic destruction of cells exposed to free drug was similar for irradiation periods of 1-7.5 h. In accordance with the mechanism of cellular uptake of polymeric conjugates by receptor-mediated endocytosis, the conjugates were less photodynamically active when incubated with cell cultures at a lower (4°) temp. Nontargeted polymeric chlorin e6 was always considerably less phototoxic when compared to targeted HPMA copolymer conjugates. Antibody response to thymus-dependent antigen (SRBC) induced in vitro is more sensitive to the targeted photosensitizer, if compared with the estimation of cell viability. It suggests that lower concns. of the photosensitizer do not destroy (disintegrate) the target cells, but their function and/or proliferation may be impaired.

L15 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:628614 CAPLUS
 DOCUMENT NUMBER: 111:228614
 TITLE: Temperature-sensitive polymer gels for delivering, removing, or reacting substances
 INVENTOR(S): Hoffman, Allan S.; Monji, Nobuo
 PATENT ASSIGNEE(S): Genetic Systems Corp., USA
 SOURCE: PCT Int. Appl., 63 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8706152	A1	19871022	WO 1987-US886	19870415
W: AU, DK, JP, KR				
RW: CH, DE, FR, GB, IT, NL, SE				
US 4912032	A	19900327	US 1986-948377	19861231

AU 8773519	A1	19871109	AU 1987-73519	19870415
EP 267239	A1	19880518	EP 1987-903136	19870415
R: CH, DE, FR, GB, IT, LI, NL, SE				
PRIORITY APPLN. INFO.:			US 1986-853697	19860417
			US 1986-948377	19861231
			US 1985-729510	19850502
			US 1986-854831	19860428
			WO 1987-US886	19870415

AB Substances may be delivered into, removed from, or reacted with a selected environment using polymer gels or coatings characterized by a critical solution temperature (CST). The CST as well as the pore structure, size, and distribution, and the absorbing capacity of the gel may be selectively controlled. Binding components may be phys. or chemical immobilized within the polymer gels and the gels may be used to sep. desired substances from a solution or to deliver a substance (e.g. hormone, vitamin, drug, dye, etc.). A (bio)chemical active component may be immobilized within the gel for selectively controlling a reaction within a particular environment. Also, a method for altering the surface wettability of CST polymers is disclosed. Polymer gels were made with 20% N-iso-Pr acrylamide (monomer) and methylene bisacrylamide (crosslinker) in H₂O or DMSO. Swollen circles of gel films were heated to 50° in buffer for 3 min, causing deswelling or desolvating of the gels. The deswelled films were incubated overnight at 4° in solns. containing myoglobin (17,800 mol. weight) and vitamin B12 (1,350 mol. weight). The films were removed, rinsed in room temperature buffer, deswelled at 50° for 4 min, and concns. of myoglobin and vitamin B12 released were determined at 280 and 360 nm, resp. The gel synthesized in H₂O absorbed and delivered myoglobin while the gel synthesized in DMSO did not. Both gels absorbed and delivered vitamin B12. Release kinetics of the vitamin from various gels showed 2 regions over time. The 1st occurred within 5 min of the temperature change and was a relatively sudden release of the solution nearest the surface of the gel. The 2nd region showed a much slower diffusion rate out of the gel after the initial stage shrinkage was complete.